Bridge Conditions

Bridges are an important element of a highway system. Bridges represent the highest single cost of all elements in the system, and any bridge deficiency will affect the entire transportation system. Bridges also present the greatest opportunity of all potential highway failures for disruption of community welfare and loss of life. Therefore, it is imperative that bridges be constructed to the same design standards as the system of which they are a part.

Congress enacted the National Bridge Inspection Program Standards on April 27, 1971, implementing the Federal Highway Act of 1968. These standards require that "all structures defined as bridges located on any of the Federal-Aid Highway Systems be inspected and the safe load carrying capacity computed at regular internals, not to exceed two years". A sufficiency rating is calculated for each bridge to establish eligibility and priority for replacement. The bridges with the highest priority are replaced as the Federal and State funds become available.

The NCDOT's Bridge Maintenance Unit, with assistance from various consultants, inspects all bridges on the State Highway System. The bridges in the Albemarle Planning Area have been analyzed and each has been given a sufficiency rating.

A sufficiency rating is used to determine if a particular bridge is substandard. The sufficiency rating is a method of evaluating factors that help determine whether a bridge is sufficient to remain in service. These factors include structural adequacy and safety, serviceability and functional obsolescence, necessity for public use, type of structure, and traffic safety features. This procedure results in a sufficiency rating in which 100% represents an entirely sufficient bridge and 0% represents an entirely insufficient or deficient bridge. A sufficiency rating of 50% or less qualifies for Federal Bridge Replacement Funds. It should be noted that a sufficiency rating below 50% does not indicate that the bridge is unsafe.

Deficient bridges are categorized as either structurally deficient or functionally obsolete. Bridges in the structurally deficient category have below average ratings in deck substructure, substructure, overall structural condition, or waterway adequacy. Functionally obsolete bridges have below average ratings in approach roadway alignment, under clearance, deck geometry, waterway adequacy, or structural condition. There are no functionally obsolete bridges within the planning area. Table 5 shows structurally deficient bridges with sufficiency ratings below 50%. The locations of these bridges are shown in Figure 10.

TABLE 5. STRUCTURALLY DEFICIENT BRIDGES

Map Index	Sufficiency Rating	Bridge Number	Location
1	23.2	187	SR 1214 over Long Creek
2	32.4	120	SR 1963 over Scaly Bark Creek
3	39.9	215	SR 1542 over Little Mountain Creek
4	40.0	33	NC 73 over Long Creek
5	47.2	66	Kingsley Drive over Long Creek